

ABSTRACT

A turbo encoder has a configuration provided with rearrangement unit which generates N types of random series by arranging random series generated by using prime numbers 5 in a buffer of N (where N is a natural number) rows \times M (where M is a natural number) columns and rearranging bits in rows by using the random series, generating a final rearrangement pattern by mapping interleaver-length data series on the rearranged N types of random series, and replacing rows in 10 the mapped data series in accordance with a predetermined rule, and finally reading the generated rearrangement pattern in columns.